Amendment to the Claims

1. (Currently amended) A neurostimulator, comprising:

an ultrasound pulse generator;

an ultrasound transducer connected to the ultrasound pulse generator; and

an electrode system capable of being acoustically connected to the ultrasound transducer and the ultrasound pulse generator, wherein the electrode system comprises a plurality of separate piezoelectric chips configured so that at least a first piezoelectric chip and a second piezoelectric chip can be differentially placed proximate a nerve bundle, wherein the plurality of piezoelectric chips are small enough to be implanted using a standard gauge syringe close to a nerve fiber in an individual, wherein each piezoelectric chip comprises (i) a pair of electrodes, (ii) a piezoelectric material electrically connected to the pair of electrodes; and (iii) a diode in electrical communication with the pair of electrodes and the piezoelectric material.

2-3. (Canceled)

4. (Currently amended) The neurostimulator of claim 1, wherein the piezoelectric chips comprise[[:]] a biocompatible coating surrounding the piezoelectric element and the diode.

5. (Previously presented) The neurostimulator of claim 1, wherein the piezoelectric material includes lead zirconate titanate (PZT).

6. (Previously presented) The neurostimulator of claim 1, wherein the piezoelectric material includes polyvinylidene fluoride (PVDF).

7. (Previously presented) The neurostimulator of claim 1, wherein each of the piezoelectric chips has the same resonant frequency.

8. (Currently amended) The neurostimulator of claim 1, wherein[[:]] each of the piezoelectric chips has a different resonant frequency.

9-18. (Canceled)

19. (Previously presented) A method of stimulating excitable tissue, comprising directing an ultrasound pulse incident to an electrode system located proximate the excitable tissue, wherein the electrode system comprises a plurality of piezoelectric chips, wherein each piezoelectric chip comprises (i) a pair of electrodes, (ii) a piezoelectric material electrically connected to the pair of electrodes; and (iii) a diode in electrical communication with the pair of electrodes and the piezoelectric material,

wherein the pressure wave is directed to be incident on the piezoelectric chips such that an electric current is generated by each piezoelectric chip, and wherein the electric current is

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rectified by the diode to a pulse duration proportional to a duration of the ultrasound pulse directed at the electrode system.

20. (Original) A method of preventing transmission of pain signals, comprising stimulating neurons using ultrasound and electric currents.

21. (Previously presented) A method of preventing transmission of pain, comprising directing an ultrasound pulse incident to an electrode system located proximate a nerve, wherein the electrode system comprises a plurality of piezoelectric chips, wherein each piezoelectric chip comprises (i) a pair of electrodes, (ii) a piezoelectric material electrically connected to the pair of electrodes; and (iii) a diode in electrical communication with the pair of electrodes and the piezoelectric material,

wherein the pressure wave is directed to be incident on the piezoelectric chips such that an electric current is generated by each piezoelectric chip, and wherein the electric current is rectified by the diode to a pulse duration proportional to a duration of the ultrasound pulse directed at the electrode system.

22. (Canceled)

23. (Previously presented) The method of claim 19, wherein the excitable tissue is the pudental nerve.

24. (New) The method of claim 19, wherein the excitable tissue is selected from the group consisting of a nerve bundle, the pudental nerve, and muscle.

25. (New) The method of claim 19, wherein the piezoelectric material includes lead zirconate titanate (PZT).

26. (New) The method of claim 19, wherein the piezoelectric material includes polyvinylidene fluoride (PVDF).

27. (New) The method of claim 19, wherein each of the piezoelectric chips has the same resonant frequency.

28. (New) The method of claim 19, wherein each of the piezoelectric chips has a different resonant frequency.

29. (New) The method of claim 21, wherein the piezoelectric material includes lead zirconate titanate (PZT).

30. (New) The method of claim 21, wherein the piezoelectric material includes polyvinylidene fluoride (PVDF).

31. (New) The method of claim 21, wherein each of the piezoelectric chips has the same resonant frequency.

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32. (New) The method of claim 21, wherein each of the piezoelectric chips has a different resonant frequency.

33. (New) The method of claim 19, wherein the ultrasound pulse has a pulse length of between 300 μs and 10 ms.

34. (New) The method of claim 19, wherein the ultrasound pulse repetition rate is between 1 pulse per second and 10 pulses per second.

35. (New) The method of claim 33, wherein the ultrasound pulse repetition rate is between 1 pulse per second and 10 pulses per second.

36. (New) The method of claim 21, wherein the ultrasound pulse has a pulse length of between 300 μs and 10 ms.

37. (New) The method of claim 21, wherein the ultrasound pulse repetition rate is between 1 pulse per second and 10 pulses per second.

38. (New) The method of claim 36, wherein the ultrasound pulse repetition rate is between 1 pulse per second and 10 pulses per second.

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